



PATENT
P53521

I.D.: REB/HB/kf

RECEIVED
IN THE CLAIM
AUG 18 1994
GROUP 2100

Please amend claims 1 – 10, 13, 15 – 18, 22 and 28, as follows;

1 1. (Twice Amended) A video printer, comprising:

2 data conversion means responsive to first data representative of successive lines of a video

3 raster scan, for deriving second data representative of successive columns of video data extending

4 transversely across lines of said video raster scan from said first data, said data conversion means

5 comprising memory means for storing said first data representative of fields of said video raster

6 scan at every vertical line for each color, and means for converting said first data stored in said

7 memory means for successive fields of the raster scan, into the columns of said second data during

8 respective successive periods associated with the occurrence of successive field periods of the

9 video raster scan; and

10 means for printing the columns of said second data successively[;

11 memory means for storing data representative of fields of said raster scan;

12 means comprising internal memory means for storing data representative of fields of said

13 raster scan and means for reading the columns of data from the memory means, for converting data

14 stored in said memory means, for successive fields of the raster scan, into the columns of digital

15 video data during respective successive periods associated with the occurrence of successive field
16 periods of the scan].

1 2. (Twice Amended) A video printer according to claim 1, wherein successive fields of the
2 video raster scan have associated blanking periods, and the columns of second data are [read-
3 from] read from the memory means during corresponding successive ones of the blanking periods.

1 3. (Twice Amended) A video printer according to claim 1, further comprising:
2 video output means for receiving said second data of the video raster scan read from said
3 memory means;[,] and
4 monitoring address generating means for addressing the memory means to produce said
5 video raster scan for said video output means.

1 4. (Twice Amended) A video printer according to claim 1, [further comprised of]
2 wherein said raster scan data [being representative] represents of a color video display, and said
3 memory means [comprising] comprises a plurality of memory units for storing signals representing
4 corresponding different colors for the raster scan field.

1 5. (Amended) A video printer according to claim 4, wherein the printing means [is
2 operative] operates to print said different color representing signals successively.

3 6. (Amended) A video printer according to claim 1, further comprising printing
4 address generating means for supplying address signals to the memory means to derive each said
5 column of second data successively.

1 7. (Amended) A video printer according to claim 1, further comprising recording
2 address generating means for generating storage addresses in the memory means for [input video]
3 storing said first data representative of said video raster scan.

C1
C2
3

1 8. (Amended) A video printer according to claim 5, [further comprised of] wherein
2 each color representing data for a field [thereof] stored in the memory means [being] is printed
3 during a period associated with a respective field period of the video raster scan.

1 9. (Amended) A high speed color video printer, comprising:
2 means for storing digital video signals in an internal memory as video data, reading and
3 accommodating printing of a column unit of said video data during one field period of each
4 blanking signal interval, and applying a field unit of said video data for a display providing a
5 variable visual image during a residual period that excludes said field period of reading and
6 enabling printing of said video data;
7 selection means for selectively providing one color of said video data from said column unit
8 of video data;
9 line memory means for enabling printing by storing and then reading said video data

10 selectively provided by said selection means; and
11 digital-to-analog converter means for enabling said display by converting field units of
12 said video data into analog signals.

1 10. (Amended) A high speed color video printer, comprising:
2 means for providing color video data from a video signal;
3 data conversion means [comprising printing address generating means, recording address
4 generating means and internal memory, said data conversion means] for storing said color video
5 data in [the] an internal memory at recording addresses generated by said recording address
6 generating means in response to a recording signal, and for [applied to said data conversion means
7 from control means and, said data conversion means] selectively reading [said] the stored color
8 video data of the internal memory in columns at printing addresses generated in said printing
9 address generating means and corresponding to pixels of a raster scan of an interlaced video field[,
10 said selective reading provided] for printing in response to a printing signal [applied to the data
11 conversion means from said control means]; and
12 line memory means for providing said selectively read color video data for column-by-
13 column printing by storing said selectively read color video data in columns.

1 13. (Amended) The high speed color video printer of claim 10, further comprising
2 means for displaying said stored color video data of the internal memory of the data conversion
3 means in response to a monitoring signal [applied to the data conversion means from said control

CGM means].

1 15. (Amended) The high speed color video printer of claim 14, wherein after said
2 data conversion means has selectively read said color video data for printing, said data conversion
3 means first provides said odd rows of an odd field of a frame of said color video data to [the]
4 displaying means for displaying said odd rows of said odd field of said frame during a remainder
5 of an odd field period of said odd field and second provides said even rows of an even field of said
6 color video data to the displaying means during a remainder of an even field period of said even
7 field.

1 16. (Amended) The high speed color video printer of claim 10, wherein said internal
2 memory comprises:

3 a first discrete memory for exclusively storing red chrominance components of said color
4 video data [at corresponding] in correspondence with said recording addresses;
5 a second discrete memory for exclusively storing green chrominance components of said
6 color video data [at corresponding] in correspondence with said recording addresses; and
7 a third discrete memory for exclusively storing blue chrominance components of said color
8 video data [at corresponding] in correspondence with said recording addresses.

1 17. (Amended) A high speed color video printer, comprising:
2 means for separating a luminance component and a chrominance component of a video

3 signal;

4 first switching means for providing, in response to a first selection signal, a first switch
5 signal [being] representative of one of a super video signal and said luminance and chrominance
6 components;

7 decoding means for providing sync signals and [said] chrominance components in response
8 to the first switching signal;

9 second switching means for providing, in response to a second selection signal, second
10 switching output signals[, said second switching output signals being] representative of one of said
11 chrominance components and said sync signal from the decoding means, and external color and
12 sync signals;

13 analog-to-digital converting means for providing [a converted said sync signal of said
14 second switching output signals, and for providing one of a] converted chrominance components
15 and converted external color signals;

16 data converting means for providing color video data corresponding to said one of
17 converted chrominance components and converted external color signals in response to a mode
18 signal;

19 third switching means for selectively applying said color video data to line memory means
20 in response to a third selection signal; and

21 an intermediate gradation converting circuit for providing said color video data of the line
22 memory means in columns to a thermal print head for printing.

1 18. (Twice Amended)

The printer of claim 17, further comprised of said data

2 converter means comprising:

3 internal memory means for storing said color video data, said internal memory means
4 comprising a print output port and a display output port;

5 recording address generating means for providing recording addresses in said internal
6 memory means for storing said color video data by generating said recording addresses in response
7 to a recording mode signal;

8 printing address generating means for providing printing addresses of said internal memory
9 means of said color video data for printing in columns by generating said printing addresses in
10 response to a printing mode signal;

11 monitoring address generating means for providing monitoring addresses of odd rows and
12 monitoring addresses of even rows of said color video data stored in said internal memory means
13 by generating said monitoring addresses of said internal memory means in response to a monitoring
14 mode signal; and

15 address selector means for selecting one of said recording addresses, said printing addresses
16 and said monitoring addresses in response respectively to one of said recording mode signal, said
17 printing mode signal and said monitoring mode signal.

1 22. (Twice Amended)

The printer of claim 18, wherein said internal memory means

2 comprises:

3 a first discrete memory for exclusively storing red chrominance components of said color

4 video data [at corresponding] in correspondence with said recording addresses;

5 a second discrete memory for exclusively storing green chrominance components of said

6 color video data [at corresponding] in correspondence with said recording addresses; and

7 a third discrete memory for exclusively storing blue chrominance components of said color

8 video data [at corresponding] in correspondence with said recording addresses.

1 28. (Amended) The method of claim 23, wherein said storing step comprises:

2 storing red chrominance components of said color video data [at corresponding] in

3 correspondence with said recording addresses in a first discrete memory of said internal memory;

4 ~~5~~ storing green chrominance components of said color video data [at corresponding] in

5 correspondence with said recording addresses in a second discrete memory of said internal

6 memory; and

7 storing blue chrominance components of said color video data [at corresponding] in

8 correspondence with said recording addresses in a third discrete memory of said internal memory.